Claims

1. A control rod blade for a boiling water reactor, wherein the control rod blade (2) comprises a plurality of channels (3), which are arranged to receive an absorber material (10), a free edge portion with a recess (8), which comprises outlets for said channels (3), and a cover element (5), which is arranged to be attached by means of at least one welding operation such that it seals at least a part of said recess (8), characterized in that the control rod blade (2) comprises a profile element (4), which, before said welding operation of the cover element (5) is performed, is arranged to be applied against a bottom surface (6a) in the recess (8) in a position such that the profile element (4) covers the outlets of said channels (3).

2. A control rod blade according to claim 1, characterized in that the profile element (4) has a width which substantially corresponds to the width of the bottom surface (6a).

3. A control rod blade according to claim 1 or 2, characterized in that the profile element (4) comprises a substantially plane surface (4a), which is arranged to be applied against a corresponding substantially plane bottom surface (6a).

4. A control rod blade according to any one of the preceding claims, characterized in that the profile element (4) comprises at least one curved side portion (4c), which has an extension upwards from the substantially plane surface (4a).

5. A control rod blade according to any one of the preceding claims, characterized in that the profile element (4) has a thickness of 0.2-0.5 mm.

6. A control rod blade according to any one of the preceding claims, characterized in that the profile element (4) has a continuous extension along the whole length of the recess (7).

7. A control rod blade according to any one of the preceding claims, characterized in that the profile element (4) is manufactured of a metal material.

8. A control rod blade according to any one of the preceding claims, characterized in that cover element (5) comprises a surface (13a), which is arranged to abut a surface (4b) of the profile element (4) when the cover element (5) is applied in the recess (8).

9. A control rod blade according to claim 8, characterized in that said contact surfaces (4b, 13a) of the profile element (4) and the cover element (5) are substantially plane.

10. A control rod blade according to any one of the preceding claims, characterized in that cover element (5) comprises a cover portion (12), which is arranged to seal the opening of the recess (8), and a support portion (13), which has a width, which is less than the width of the recess (8).

11. A control rod blade according to any one of the preceding claims, characterized in that the recess (8) comprises a groove (7) which, after that the profile element (4) has been applied in the recess (8), is arranged to form a passage (15), which extends between adjacent channels (3) under the profile element (4).

12. A control rod blade according to any one of the preceding claims, characterized in that cover element (5) is arranged to be attached at the edge portion of the control rod blade (2) by means of two longitudinal weld joints (17).

13. A control rod blade according to any one of the preceding claims, characterized in that said absorber material (10) is powdered.

14. A control rod blade according to claim 13, characterized in that the absorber material (10) comprises boron carbide.

15. A control rod for a boiling water reactor comprising at least a control rod blade according to any one of the preceding claims.